### PATENT COOPERATION TREATY

## **PCT**

# TRANSLATION INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 0000055207				FOR FURTHER ACTI	ON	See Form PCT/IPEA/416			
International application No.				International filing date (da	ay/month/year)	Priority date (day/month/year)			
PCT/EP2004/014455				18.12.2004		22.12.2003			
Internat	ional Pa	tent Classification	n (IPC) or natio	onal classification and IPC					
	B01J23/46, B01J37/18, C07D303/30, C08G59/24, B01J21/08, B01J23/58								
Applica	nt								
BAS	F A	KTIENGES	ELLSCH	AFT					
This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.									
2.		EPORT consists		_	sheets, including this cover sheet.				
3.			_	NNEXES, comprising:		5 · · · · · · · · · · · · · · · ·			
	a. D	7		to the International Bureau	) a total of 6	sheets, as follows:			
	a. 🔼	`				amended and are the basis for this report and/or			
	sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).								
	sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental								
	Box.								
	b. (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s))								
		related therete	in computer	readable form only as ind	icated in the Supple	_ , containing a sequence listing and/or tables mental Box Relating to Sequence Listing (see			
				rative Instructions).	icated in the Supple	mental Box Relating to Sequence Listing (see			
4.	This re	eport contains ind	lications relati	ng to the following items:					
	Box No. I Basis of the report								
	Ш	Box No. II	Priority						
	Ш	Box No. III	Non-establis	shment of opinion with rega	rd to novelty, invent	ive step and industrial applicability			
	Box No. IV Lack of unity of invention								
	Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement								
	Box No. VI Certain documents cited								
	Box No. VII Certain defects in the international application								
Box No. VIII Certain observations on the international application									
Date of	submiss	ion of the deman	d	Date	of completion of thi	is report			
Name a	nd maili	ng address of the	IPEA/EP	Autl	Authorized officer				
Facsimi	Facsimile No.				Telephone No.				

#### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/014455

Box	No. I	Basis of the report							
1.		h regard to the language, this report is based on the international cated under this item.	onal application in the language in	which it was filed, unless otherwise					
	This report is based on translations from the original language into the following language which is the language of a translation furnished for the purposes of:  international search (Rule 12.3 and 23.1(b))  publication of the international application (Rule 12.4)								
2.	with regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):  the international application as originally filed/furnished the description:								
		pages 1-29 pages*		as originally filed/furnished					
	$\square$		_ received by this Authority on						
		nos.		as originally filed/furnished					
		nos.*	as amended (togethe	er with any statement) under Article 19 20.10.2005 with letter					
		nos.* 1-43	received by this Authority on	of 19.10.2005					
		nos.*	received by this Authority on						
		the drawings: sheets		as originally filed/furnished					
		sheets*	received by this Authority on						
		sheets*	received by this Authority on						
		a sequence listing and/or any related table(s) – see Suppler	mental Box Relating to Sequence L	isting.					
3.		The amendments have resulted in the cancellation of:							
		the description, pages							
		the claims, nos.							
		the drawings, sheets/figs							
		the sequence listing (specify):							
		any table(s) related to sequence listing (specify):							
4.		This report has been established as if (some of) the amen they have been considered to go beyond the disclosure as f							
		the description, pages							
		the claims, nos.							
		the drawings, sheets/figs							
		the sequence listing (specify):							
		any table(s) related to sequence listing (specify):							
*	If ite	em 4 applies, some or all of those sheets may be marked "suj	perseded."						

#### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;

- citations and explanations supporting such statement

   1. Statement
   Novelty (N)
   Claims  $\frac{3-43}{1-2}$  YES

   Claims  $\frac{1-2}{2}$  NO

   Inventive step (IS)
   Claims  $\frac{29-43}{3-28}$  YES

   Claims  $\frac{3-28}{3-28}$  NO

   Industrial applicability (IA)
   Claims  $\frac{1-43}{2}$  YES

   Claims  $\frac{1-43}{2}$  NO
- 2. Citations and explanations (Rule 70.7)

This report makes reference to the following documents:

D1: WO 02/100538 A (BASF AKTIENGESELLSCHAFT;
BOETTCHER, ARND; VANOPPEN, DOMINIC; ARNDT,
JA) 20 December 2002 (2002-12-19)

D4: EP-A-1 270 633 (MITSUBISHI CHEMICAL CORPORATION) 2 January 2003 (2003-01-02)

D5 is not cited in the international search report. A copy of the document is appended:

D5: US 4455389

- 1. The present application fails to meet the requirements of PCT Article 33(1) for the following reasons:
- 1.1 D1 (page 4, lines 13-35; page 10; lines 39-41; claims 1-4) discloses  $Ru/SiO_2$  catalysts for the hydrogenation of compound II (claim 17) to produce compound I (claim 17). D1 mentions that the  $SiO_2$  substrates can contain MgO or CaO.
- **D4** (paragraphs [0018], [0020], [0031] [0033], [0046];

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

example 7, claims 1, 2, 7, 16 and 18 to 20) discloses Ru/activated carbon catalysts for the hydrogenation of compound II (claim 17) to produce compound I (claim 17). MgO is used for the adsorption of the ruthenium discharged during the reaction (leaching). A person skilled in the art anticipates from  $\bf D1$  the use of  $\rm SiO_2$  with the addition of MgO instead of activated carbon in order to prevent ruthenium from washing out during the reaction.

Since it is presently not clear what advantage is gained by impregnating a provisional ruthenium catalyst with magnesium ions instead of using a substrate that already contains MgO, an inventive step cannot be recognized. The subject matter of at least claims 1 and 14 to 28 therefore does not involve an inventive step within the meaning of PCT Article 33(3) in relation to a combination of D4 and D1.

1.2 D5 (column 6, lines 10-15) discloses a heterogeneous ruthenium catalyst containing silicon dioxide as a substrate which was impregnated with magnesium ions from a magnesium (II) salt solution prior to the application of ruthenium.

The applicant should note that claim 1 defines a product by means of its method of production. Since a product is not automatically novel just because it has been produced by means of a novel method and since nothing can be found in the application which proves that the product according to claim 1 differs from the product of D5, claim 1 cannot be recognized as novel.

The present application fails to meet the requirements of PCT Article 33(1) because the subject matter of at least

#### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/EP2004/014455

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement											
claims	1	and	2	is	not	novel	within	the	meaning	of	PCT
Articl	e	33 (2)	) .								